

## Section 2: Define Phase and Box 1



LSSTB Ch. 1

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## Learning Objectives

- At the end of this section you will be able to:
  - Complete Box 1 of the A3
  - List the major DMAIC activities in the DEFINE phase:
    - Charter validation
    - Launch Team
    - Voice of the Customer
    - Stakeholder Analysis
    - Communication Plan
    - Prepare DEFINE gate review

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## Approaches to Improvement



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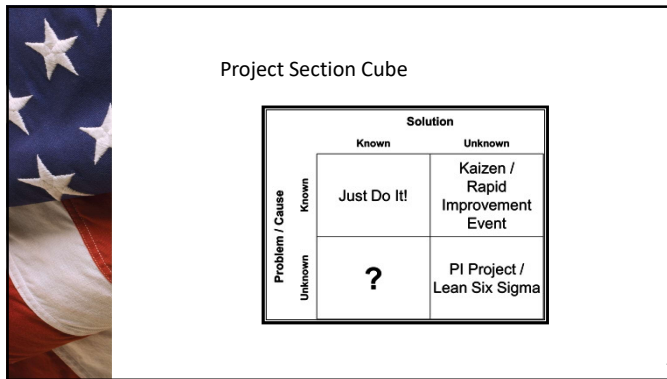
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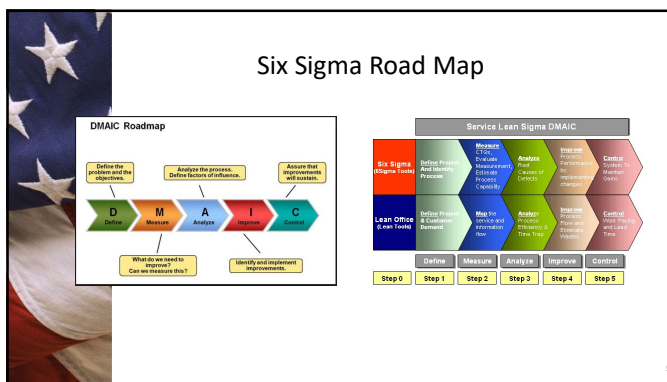
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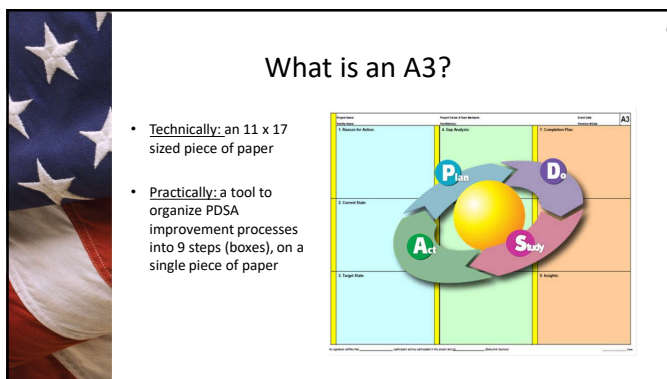
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## Lean Six Sigma: DMAIC and A3 Crossroad

DMAIC Format	A3 Format
Define	Box 1: Reason for action
Measure	Box 2: Current state Box 3: Target State
Analyze	Box 4: Gap Analysis
Improve	Box 5: Solution Approach Box 6: Rapid Experiments
Control/Sustain	Box 7: Completion Plan Box 8: Confirmed State Box 9: Insights


## Deliverable of a Lean Six Sigma Project

Define	Measure	Analyze	Improve	Control
<input type="checkbox"/> Problem Statement <input type="checkbox"/> Aim Statement <input type="checkbox"/> Project Scope <input type="checkbox"/> Project Champion <input type="checkbox"/> Process Owner <input type="checkbox"/> Metrics <input type="checkbox"/> SIPOC Map <input type="checkbox"/> Stakeholder Analysis <input type="checkbox"/> Communication Plan	<input type="checkbox"/> Current State Map <input type="checkbox"/> Data Collection Plan <input type="checkbox"/> Baseline Data Summary <input type="checkbox"/> Financial & Operational Benefits Estimate <input type="checkbox"/> Target State	<input type="checkbox"/> Detailed Current State Process Map <input type="checkbox"/> Target/Future State Process Map <input type="checkbox"/> Waste Identification <input type="checkbox"/> Gap Analysis <input type="checkbox"/> Prioritized & Validated Root Causes	<input type="checkbox"/> Future State Process Map <input type="checkbox"/> Prioritized Solutions <input type="checkbox"/> Rapid Experiments <input type="checkbox"/> Risk Analysis and Mitigation <input type="checkbox"/> Results & Improvement Validation	<input type="checkbox"/> Control Plan <input type="checkbox"/> Future State Process Documentation <input type="checkbox"/> Handoff & Follow-Up Plans <input type="checkbox"/> Validated Financial & Operational Benefits <input type="checkbox"/> Executive Summary / Final Report
Estimated Date	Estimated Date	Estimated Date	Estimated Date	Estimated Date

## Box 1: Reason for Action

- Contents:
  - Problem Statement
  - Start/Stop
  - Scope
- Why is this project/problem important?
- Why should the reader care about this situation & be motivated to participate in improvement?
- Is there a clear theme for the problem contents?
- Is the topic relevant to strategic objectives?
- Is there any other reason for working on this topic

1	4	7
2	5	8
3	6	9



## Box 1: Reason for Action

**1. Reason for Action**

**Problem Statement:**  
Currently, the process to get CBOC nurses hired takes too long. This causes us to miss opportunities to provide Veteran care, staff dissatisfaction with workload, loss of good candidates to competitors, and high hiring costs.

**Start Point:** Hiring Manager turns in appropriate hiring forms  
**Stop Point:** Offer is made to potential candidate

**In Scope:** CBOC Nurses  
**Out of Scope:** Medical Center Nurses and hiring for all other CBOC positions

**NOTES:**

- Clear, succinct problem statement serves as the "compass" for the project
- Plenty of room for verbiage in Box 2 - Current Condition
- Box 3 contains the project AUM Statement/Objectives
- Start/Stop Points: Serve as boundaries of process and avoid scope creep

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## Define Phase

- Purpose: Define the Problem
- Can take 2 – 4 weeks
- 4 Major Activities:
  - Validating the Charter
  - Launching the Team
  - Preparing for the Define Gate Review
  - Managing Change

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## Validating the Charter

- At the 1<sup>st</sup> team meeting, the team will review the initial charter & make changes as needed
- Charter Includes:
  1. Problem Statement
  2. Aim Statement
  3. Business Impact
  4. Measures and Goals
  5. Project Scope
  6. Project Timeline

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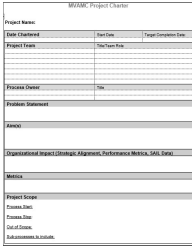
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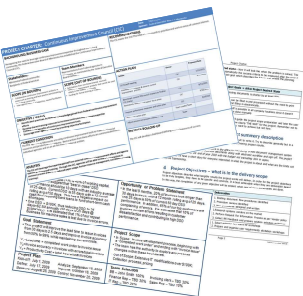
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### Blank Charter Template



### Charter Examples



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### Problem Statement (Charter)

- Provides a specific statement of the current pain resulting from the broken process
- Includes:
  - What is occurring (the current "pain")?
  - Where is the occurrence?
  - When did the problem start?
  - Extent of the problem (use baseline data)?



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### Problem Statement: Examples

- Poor Problem Statement:**
  - Our invoice error rate is too high, resulting in dissatisfied customers
- Good Problem Statement:**
  - Over the past year, the Southwest region invoicing process has averaged 28 billing errors per 100 invoices. This error rate is twice as much as any other region and has been attributed to the loss of three key customers, representing \$3.5 million in annual lost revenue



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### Exercise: Review Problem Statements (15 min)

1. In your group, develop the problem statement for the DOP exercise.
2. Complete **Problem Statement** on Charter Template
3. Be prepared to discuss within larger group

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### Aim or Goal (Charter)

- Aim Statements should be S.M.A.R.T.
  - **Specific** – Concise & Clear
  - **Measurable** – Quantifiable
  - **Achievable** – Within Scope
  - **Realistic** – Relevant & relates to problem statement
  - **Time Bound** – has a due date
- Should contain specific things that all can understand:
  - What are you going to do?
  - When will it be done?



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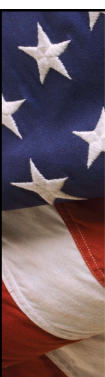
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### Aim Statement Format

To \_\_\_\_\_(increase/decrease/improve/reduce)  
 \_\_\_\_\_(issue) from \_\_\_\_\_(baseline value) to  
 \_\_\_\_\_(target value), by \_\_\_\_\_(date).

\*May include what measurement system being used for clarification

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## Aim Statement Examples: Good or Bad?

To improve communication between primary & specialty care services.

The EMS will decrease the number of lost reusable sharps containers from 85 over the past 12 months, with a cost of \$2,800.00, to less than 40 by the end of October 2017 and to zero by the end of December 2017.

To decrease patient wait times in orthopedic clinic.

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## Exercise: Develop Aim Statement (15 minutes)

1. In your group, write your project Aim Statement (you may not have the metrics to the Aim)
2. Complete **Aim Statement** on Charter
3. Be prepared to discuss with larger group

To \_\_\_\_\_ (increase/decrease/improve/reduce),  
 \_\_\_\_\_ (issue)  
 From \_\_\_\_\_ (baseline value), to \_\_\_\_\_ (targeted value).  
 By (date) \_\_\_\_\_, Using the \_\_\_\_\_ measurement system.

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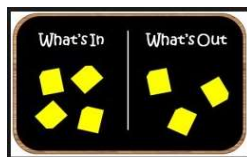
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## Project Scope (Charter)

- Describe the project boundaries (start & end of process steps)
- Describe what is not part of the scope



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## SIPOC Tool

- SIPOC – **S**uppliers, **I**ntputs, **P**rocess, **O**utputs, & **C**ustomers
- Purpose: to identify key stakeholders in the process to determine team composition & enable the best chance for success
- Summarizes inputs & outputs of the processes in table form
- Suppliers & customers may be internal or external
- Inputs & Outputs may be materials, services, or information



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## Example SIPOC

Suppliers	Input/Requirements	High Level Process Steps	Output/Requirements	Customers/Stakeholder
ED/Surgeons/Primary Care MD Charge Nurse (Case Management?) gD MD admitting MD Nurse (admitting Unit) Transporter (Transcare, EMT, Nurses)	Expertise - Expertise - Knowledge of Bed Available Expertise - Regulation of Patient Beds, Status, etc. Orders, History Expertise - Equipment Resources	MD Order/Request for Inpatient Admission Bed Assignment High Orders (Triage, ID Tag, etc.) - Admitting MD Orders Nursing Report Patient Registration Placed in Patients Bed	Pt Info - status, Room Type Needed, Equipment - Room Number - Assignment Unit (Equipment) - ID Receiving Nurse Patient Triage Patient Information Needs, Status, etc. Orders, History Patient Transported to Bed Patient Physically Placed in Bed - Arrival Communicated - Activation of Inpt Orders	Bed Control, Unit Secretary Charge Nurse (Both Units) Bed Control Bedside Nurse (Both Units) Unit Secretary (Both Units) Case Management? Patients All involved Units Staff Unit Sec. (Receiving Units) Receiving Nurse Housekeeping Patient Bed Control Patient Care Assistant (PCA) Receiving Nurse Admitting MD Ancillary Dept. Per Orders

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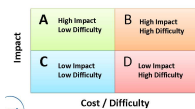
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## Business Impact (Charter)

- **Type I Benefits:** Have a direct impact on the bottom line with clear cause-and-effect relationship between the project & resulting gain that can be measured (revenue, cost, capital, inventory change compared to baseline).
- **Type II Benefits:** Result from productive redeployments of resources to other functions or areas with demonstrated need (reallocation of resources, cost avoidance, etc.)
- **Type III Benefits:** Create direct potential opportunities for future revenue growth but cause and effect relationship is less certain (classification for revenue benefits but difficult to isolate from other factors)
- **Type IV Benefits:** Help the organization strategically and over the long-term, but difficult to quantify or prove cause-and-effect (improved employee morale, improved regulatory compliance, improved customer satisfaction)



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### Exercise: Defining Business Impact (10 minutes)

1. Complete **Organizational Impact** for the project
    - Utilize Type I – IV Benefits on previous slide
  2. Be prepared to discuss with larger group
- Why should we do this?
  - What is the benefit?
  - How does the project align with the organizational strategy?
  - What is the quantified value of the project (\$\$)?



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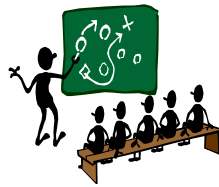
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### Project Team Members

- Include everyone who owns or touches the process
- The team needs clear sponsorship from executive leaders
- It needs passionate front-line staff involved with the improvement process
- It needs a facilitator or improvement professional with deep knowledge & skills in improvement work
- All of these must be unified around a common aim or goal



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### Team Roles

- **Champion/Sponsor:**
  - The formal leaders & prime movers of the project.
  - Align resources and monitor success
  - Advise, support, help the team address barriers, & assist in getting support for decisions
- **Process Owner:**
  - Leader or manager who owns the process as part of regular operations
- **Facilitator:**
  - Improvement process expert who assists the team in following the steps in the process from inception to sustainment
- **Team Members:**
  - People who are part of the process or affected by the process



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### Exercise: Define your Team (10 minutes)

- Be prepared to discuss with larger group
  - Who are the key members?
  - What are the team roles?



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### Project Management:

- Key Tools:
  - Communication Plan
    - Who do you need to talk with & how often
  - Project Risk Analysis
    - What can kill your project?
  - Stakeholder Analysis
    - Who is involved & how do they feel about the process?



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### Identifying Stakeholders

- Any person or group who are affected by the outcome of a project to improve a product or service
- Types of Stakeholders:
  - External Customers (Voice of the Customer)
  - Internal Customers (Voice of the Customer)
  - Business (Voice of the Business)
  - Other Stakeholders (suppliers, regulatory agencies, employee safety, etc.)



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- Lack of stakeholder buy-in is one of the most common project failure modes
- Proactively analyzing stakeholder buy-in **early** allows issues to be addressed proactively
  1. Identify Stakeholders
  2. Assess their power & degree of interest in the process
  3. Develop & execute a plan to address buy-in issues of high-influence stakeholders
  4. Continue monitoring for evolving attitudes & influence



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**Stakeholder Analysis Definitions:**

**Feedback Comments** List any additional relevant information

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### Exercise: Develop a Communication Plan (10 min.)

- Consider the Following Questions:

1. Who are the key stakeholders/groups?
2. What is the impact/importance of doing the proposed project to these stakeholders?
3. How can you appeal to each stakeholder's frame of reference? (What is in it for the them?)
4. What message will be used to communicate the need for change?
5. What information does each group need?  
— Examples: Project status, key updates, successes to date
6. How does this communication plan coincide with current project reporting? Are there existing communication vehicles that can be utilized? (ex: committees)

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Project Communication Plan						
Audience	Media	Purpose	Topic	Owner	Frequency	Notes
Staff	F2F, Email	Directly impact by project changes	Project updates, events and data	Manager	Weekly	

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### Voice of the Customer (VOC)

- To learn what the customers care about
  - To set priorities & goals consistent with customer needs
  - To determine what customer needs the project can meet
- Examples:
    - Patients want wait times to be less than 5 minutes
    - Employees want non-icy sidewalks

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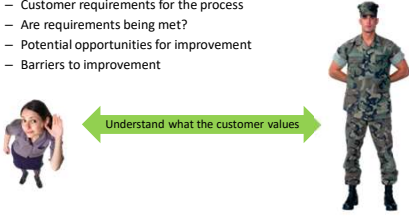
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## Voice of the Customer Analysis

- Provides valuable information about the current process state from everyone involved in the process
  - Customer requirements for the process
  - Are requirements being met?
  - Potential opportunities for improvement
  - Barriers to improvement



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## How to Capture VOC:

- Interviews
  - Conduct in groups of 2 if possible
  - Ask predetermined, open-ended questions
  - Encourage the customer to do the talking
- Surveys
  - Phone or written
- Observation
- Focus Group

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## Voice of the Business (VOB)

- Derived from financial information & data, performance metrics, Director's performance plan, etc.
- Reveals the project's value through identifying the financial and quality outcomes of the project once deployed
- Provides clarity identifying revenue growth areas, economic value added, & market value

Examples:

- Decreasing cost related to inventory
- Reducing non-value added time
- Decreasing readmission rates

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- What are the key VOC questions you need answered?
- What is the best approach for doing the VOC research?
- How many customer data points should be collected?

Voice of Customer (VOC) / Voice of Business (VOB)		
<b>Voice of the Customer</b> What does the customer want from us?	<b>Key Customer Insights</b> What needs do people have relating to the customer expectations?	<b>Key Measure of Success (KMS)</b> What measures could we use to quantify the customer expectations in meeting the customer expectations?
<b>Voice of the Businesses</b> What does the business require from this process?	<b>Key Business Insights</b> What needs do people have relating to the business needs?	<b>Key Measure of Performance (KMP)</b> What measures could we use to quantify the process' performance in meeting the business needs?

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- | VOC                                       | The Why (after clarification)       | Critical Customer Requirement |
|---|-------------------------------------|-------------------------------|
| "I don't like dealing with your company." | Products are not delivered on time. | 10 days lead time (+/- 1 day) |

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## Define Tollgate

- What is a Gate Review?
  - A critical checkpoint in the DMAIC process, bringing all key stakeholders together & resulting in a formal GO/NO Go decision on the project
- Ensures the project is still worth completing
- Ensures alignment between the team
- Opportunity for the team to ask for additional assistance, if necessary
- Validation that the DMAIC process is being diligently applied
- To reduce the risk of project failure & ensure timely completion of the project & validate the business need for the solution



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## Define Tollgate Deliverables

- Validated Project Charter
- Communication Plan
- SIPOC Map
- Completed Define Tollgate PowerPoint Slide Deck



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